

CLAIMS

1. A method of determining feedback in a communication system, wherein data is transmitted from a transmitter to a receiver, and in response to data reception at the receiver, feedback is generated based on the received data comprising the steps of:

classifying the data into data entities of different levels of importance, and

determining feedback based on at least one data entity of one level of importance.
2. The method according to claim 1, wherein the step of classifying the data entities includes determining which data entities are required and/or are optional to satisfy a service requirement.
3. The method according to claim 1, wherein the levels of importance are predetermined or conveyed during setup of the transmission.
4. The method according to claim 1, wherein the levels of importance are dynamically varied during transmission and signalled from the transmitter to the receiver.
5. The method of claim 1, wherein the the data entities of different levels of importance are assigned hierarchical transmission modes in multi-level modulation formats.
6. The method according to claim 1, wherein the data entities of different levels of importance are assigned hierarchical parts of the transmission data.
7. The method according to claim 1, wherein the communication system is a multi-cast transmission system comprising at least one data transmitter and multiple data receivers.
8. The method according to claim 7, wherein the feedback is transmitted at least from one designated multicast receiver.

9. The method according to claim 1, wherein the communication system is a wireless mobile communication system having a plurality of mobile receivers with different qualities of the received data.
10. The method according to claims 8 and 9, wherein the feedback is transmitted by the multicast receiver only if a QoS criterion for at least one data entity of one level of importance has not been met.
11. The method according to claim 1, wherein the data is transmitted using MPEG data compression, comprising frames or pictures having different levels of importance.
12. The method according to claim 1, wherein the feedback signifies positive or negative acknowledgements of received data packets.
13. The method according to claim 1, wherein the feedback requests control of at least one of the transmission parameters including transmission power, coding gain, modulation, data rate and error probability.
14. The method according to claim 1, wherein a adjustment of the power ratio between the data entities of different importance levels is effected.
15. The method according to claims 2 and 14, wherein the required data entities will be transmitted with increased power, while the optional data entities will be transmitted with decreased power, such that the combined transmitted power remains unchanged.
16. The method according to claim 1, wherein for data entities of different importance levels, different modulation schemes are selected.
17. The method according to claim 1, wherein for data entities of different importance levels uniform and non-uniform signal constallations are selected.

18. The method according to claim 1, wherein the signal constellation employed for modulation is selected such that a desired error resilience of the data entities is translated into the arrangement of the signal constellation points.
19. A receiver in a communication system, wherein data is transmitted to a receiver and in response to data reception, the receiver generates feedback for retransmission to the transceiver, comprising:

means for classifying the received data into data entities of different levels of importance, and

means for determining feedback based on at least one data entity of one level of importance.
20. The receiver according to claim 19, wherein the means for classifying comprise means for determining which data entities are required and/or are optional to satisfy a service requirement.
21. The receiver according to claim 19, further comprising means for storing criteria which define the levels of importance, or for storing the levels of importance, which are signalled from the transmitter.
22. A transmitter in a communication system, wherein data is transmitted from the transmitter to the receiver and in response to data reception at the receiver, feedback is generated based on the received data, comprising:

means for classifying the data into data entities of different levels of importance, and

signalling criteria defining the levels of importance, or signalling the levels of importance, to the receiver.

23. The transmitter according to claim 22, wherein the means for classifying comprise means for determining which data entities are required and/or are optional to satisfy a service requirement.
24. The transmitter according to claim 22, wherein the criteria defining the levels of importance, or the levels of importance, are dynamically varied according to at least one of the transmission parameters including transmission power, coding gain, modulation, data rate and error probability.
25. The transmitter according to claim 22 to 24, wherein the transmitter uses MPEG data compression comprising frames or pictures having different levels of importance.
26. A communication system comprising a transmitter according to one of claims 22 to 25 and a receiver according to one of claims 19 to 21.
27. The communication system according to claim 26, wherein the communication system is a multicast transmission system, comprising at least one data transmitter and multiple data receivers.
28. The communication system according to claim 26 or 27, wherein the communication system is a wireless mobile communication system having a plurality of mobile receivers with different qualities of the received data.